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Pneumatic Paper Cup & Paper Plate Making Machine

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Abstract— *Generally The Cups And plate are made in plastics. The plastics are harmful and it has many This is operated by the pneumatic system. By using this we can produce cup at high production rate. By using different shape and size cups. The machine size is comfortable to suit anywhere.In this machine the air enters to the flow control valve and gives pressure to the double acting cylinder. The direction is control by the direction 5/2 control valve. The movement of piston will be varied by the adjusting the flow control valve. By adjusting the speed, the production rate will be varied. This project is very economical and reduce hazardous effects appeared from plastic used.*

Keyword: *Die, punch, machine, paper dish, pneumatic compressor.*

I. INTRODUCTION

Pneumatics is a branch of engineering that makes use of gas or pressurised air. Pneumatic Systems used in industry are commonly powered by compressed air or compressed insert gases. A centrally located and electrically. Powered compressor powers cylinders, air motors, pneumatic actuators and other pneumatic devices. A pneumatic system controlled through manual or automatic solenoid valves is selected when it provides a lower cost, more fiexible, or safer alternative to electric motors and hydraulic actuatos.

Pneumatics also has applications in dentistry, construction, mi and other areas. The pneumatic paper making press is used to different shapes of cup in faster production rate. The principle of operation is the same as the conventional simple press. The difference is only in the type of drive and the type of fixtures used.

A pneumatic system is a system that uses compressed air to do work. They capture air, transport it around a circuit, and accomplish designated tasks with the generated energy. These are present in both manual and automated machines, and within the construction or mining industry.

II. NEED FOR THE SYSTEM

The origins of pneumatics can be traced back to the first century when ancient Greek mathematician Hero of Alexandria wrote about his inventions powered by steam or the wind.

German physicist Otto Von Guericke (1602 to 1686) further developed the idea. He invented the vacuum pump, a device that can be out air or gas from the attached vessel. He demonstrated the vacuum pump to separate the pairs of copper hemispheres using air pressure. The field of pneumatics has changed considerably over the years. It has moved from small handheld device to large machines with multiple parts that serve different function.

Further developments took place throughout the century with advancements in labor- saving devices in the from of machinery that would assist or even reduce the need for manpower as well as automatics machinery, tools and control systems.

The pneumatics industry continues to evolve today with the leading names continuing to produce components that offer that little bit more to improve efficiency, performance and functionality.

It is clear that pneumatics have a rich history that dates back many years and at present seems to show no sign of slowing down with innovative pneumatic solutions being developed and released on a regular basis. With such an important role to play in of many different industries, pneumatics is sure to continue on through the ages for some time yet.

Hardware Requirements:

- Recycling
- Chemistry-free
- Process less
- Non-polluting raw material
- Eco-Friendlier
- Stronger
- More durable
- Can come in any colour

Software Requirements:

- IT companies.
- Educational Institutions Canteens
- Industrial Canteens
- Restaurants
- Fast Foods
- Catering People
- Tea Shops
- Who serve snacks in paper plates and use paper cups
- Restaurants

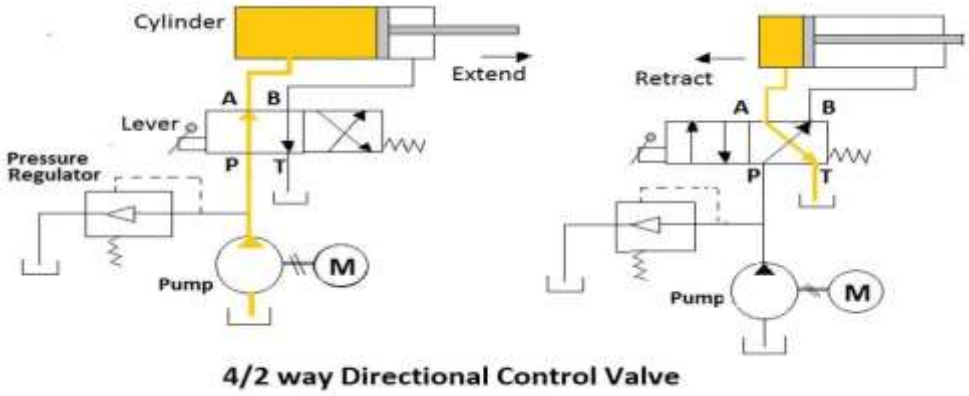
Hawkers which sell food items on the roadside

III.BENEFITS OF DIRECTIONAL CONTROL VALVES

The below are the types of directional control valves as follows.

- Based on the type of construction.
- Based on the number of ports.
- Based on the number of switching positions.
- Based on actuating mechanism.

IV. BASIC ARCHITECTURE



4/2 way Directional Control Valve

V.CONFIGURATION

VI.CONCLUSION

This paper cup and dish making machine gives desire shapes of cup and dish as approximate efficiency of 80%. It is clearly seen that the project is economically possible in all aspect, and paper recycling unit has a potential to generate employment for many workers and can also act as an environment friendly initiative for the world.

As we conclude our project report we are happy that we have learned many things not only about the topic we have chosen, but many things like working together as team, learning to approach the managers, collecting in formations from the persons etc. It was a learning experience for each of us as an individual as well as group. This experience would make an impact in our studies as well as in the carrier we choose.

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